drafting; while the student who must, by force of circumstances, be self-instructed, could not be better provided therefor.

The treatment of valve-motion is admirable. The precedence given the Bilgram diagram over the Zeuner, although unusual, is fully warranted, the former being far superior for designing, while possessing equal merits with the latter for analysis.

The frequent shaded perspectives will be especially appreciated by the beginner in machine drawing, obviating, as they do, in considerable degree, the necessity for the models recommended but not always obtainable.

Among the more important features appearing for the first time in this edition are the "Course in Lettering" and the "Present Practise in Drafting Room Methods," the latter a summary of replies, from two hundred of the leading engineering firms of this country, to thirty-five questions as to shop practise. An ample index completes this altogether valuable work.

FREDERICK N. WILLSON

SCIENTIFIC JOURNALS AND ARTICLES

THE February number (volume 15, number 5) of the *Bulletin of the American Mathematical Society* contains the following papers: "The Second Regular Meeting of the Southwestern Section," by O. D. Kellogg; "Remarks Concerning the Second Variation for Isoperimetric Problems," by Oskar Bolza; "Notes on the Simplex Theory of Numbers," by R. D. Carmichael; "The Solution of Boundary Problems of Linear Differential Equations of Odd Order," by W. D. A. Westfall; "A Class of Functions Having a Peculiar Discontinuity," by W. D. A. Westfall; "On Certain Determinants Connected with a Problem in Celestial Mechanics," by H. E. Buchanan; "Sylvester's Mathematical Papers," by L. E. Dickson; "Hilton's Finite Groups," by Arthur Ranum; "Shorter Notices": Ball-Freund's Histoire des Mathématiques, and Günther's Geschichte der Mathematik, by D. E. Smith; Tannery's Manuscrits de Evariste Galois and Minkowski's Diophantische Approximationen, by L. E. Dickson; Sturm's Lehre von den geometrischen Verwandtschaften, Band II., by Virgil Snyder; Arnoux's Arithmétique graphique, by W. H. Bussey; Enriques-Fleischer's Fragen der Elementargeometrie, by H. E. Hawkes; Poincaré's Leçons de Mécanique celeste, by F. R. Moulton; Gutzmer Tätigkeit der Unterrichtskommission, by J. W. A. Young; "Notes"; "New Publications."

The March number of the *Bulletin* contains: "The Fifteenth Annual Meeting of the American Mathematical Society," by F. N. Cole; "The Winter Meeting of the Chicago Section," by H. E. Slaught; "The Sixteenth Meeting of the American Association for the Advancement of Science," by G. A. Miller; "Some Surfaces Having a Family of Helices as One Set of Lines of Curvature," by Eva M. Smith; "Note on Enriques's Review of the Foundations of Geometry," by A. R. Schweitzer; "Notes"; "New Publications."

SPECIAL ARTICLES

A POSSIBLE ERROR IN THE ESTIMATES OF THE RATE OF GEOLOGIC DENUDATION[1]

THE presentation at the Baltimore meeting of the American Chemical Society of a paper by Dole and Stabler on the rapidity of geologic denudation recalls attention to a possible source of error in such estimates which has been already implied in the writings of Walther, Udden and other students of æolian geology. The peculiarly thorough and comprehensive figures of Dole and Stabler are deduced, as have been all previous ones, from the examination of river waters, and are based upon the assumption that all material which is removed from the land to the sea is carried in suspension or solution by outward-flowing water. Recent studies on the magnitude of æolian transport cast some doubt upon the validity of this assumption. It has become apparent that much surface material is moved from place to place by æolian action and that much of this transport is to be ascribed to the slow and unnoticed, but continuous, action of

[1] Published by permission of the Secretary of Agriculture.